



ENTERED

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,009

DATE: 04/10/2002

TIME: 14:17:31

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

4 <110> APPLICANT: Felsch, Jason S.  
5 Annis, David Allen  
6 Kalghatgi, Krishna  
7 Nash, Huw M.  
9 <120> TITLE OF INVENTION: Affinity Selection-Based Screening of Hydrophobic Proteins  
11 <130> FILE REFERENCE: 111025.173 US2  
13 <140> CURRENT APPLICATION NUMBER: 10/029,009  
C--> 14 <141> CURRENT FILING DATE: 2002-03-28  
16 <150> PRIOR APPLICATION NUMBER: US 60/258,970  
17 <151> PRIOR FILING DATE: 2000-12-29  
19 <160> NUMBER OF SEQ ID NOS: 34  
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
23 <210> SEQ ID NO: 1  
24 <211> LENGTH: 8  
25 <212> TYPE: PRT  
26 <213> ORGANISM: Artificial Sequence  
28 <220> FEATURE:  
29 <223> OTHER INFORMATION: epitope FLAG tag sequence  
31 <400> SEQUENCE: 1  
32 Asp Tyr Lys Asp Asp Asp Asp Lys  
33 1 5  
36 <210> SEQ ID NO: 2  
37 <211> LENGTH: 9  
38 <212> TYPE: PRT  
39 <213> ORGANISM: Artificial Sequence  
41 <220> FEATURE:  
42 <223> OTHER INFORMATION: epitope EE tag sequence  
44 <400> SEQUENCE: 2  
45 Glu Glu Glu Glu Tyr Met Pro Met Glu  
46 1 5  
49 <210> SEQ ID NO: 3  
50 <211> LENGTH: 9  
51 <212> TYPE: PRT  
52 <213> ORGANISM: Artificial Sequence  
54 <220> FEATURE:  
55 <223> OTHER INFORMATION: epitope hemagglutinin tag sequence  
57 <400> SEQUENCE: 3  
58 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala  
59 1 5  
62 <210> SEQ ID NO: 4  
63 <211> LENGTH: 12  
64 <212> TYPE: PRT  
65 <213> ORGANISM: Artificial Sequence

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,009

DATE: 04/10/2002

TIME: 14:17:31

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

```

67 <220> FEATURE:
68 <223> OTHER INFORMATION: epitope epitope MYC tag sequence
70 <400> SEQUENCE: 4
71 Lys His Lys Leu Glu Gln Leu Arg Asn Ser Gly Ala
72 1 5 10
75 <210> SEQ ID NO: 5
76 <211> LENGTH: 11
77 <212> TYPE: PRT
78 <213> ORGANISM: Herpes simplex virus
80 <400> SEQUENCE: 5
81 Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp
82 1 5 10
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 39
87 <212> TYPE: PRT
88 <213> ORGANISM: Rhodopsin
90 <400> SEQUENCE: 6
91 Met Asn Gly Thr Glu Gly Pro Asn Phe Tyr Val Pro Phe Ser Asn Lys
92 1 5 10 15
93 Thr Gly Val Val Arg Ser Pro Phe Glu Ala Pro Gln Tyr Tyr Leu Ala
94 20 25 30
95 Glu Pro Trp Gln Phe Ser Met
96 35
99 <210> SEQ ID NO: 7
100 <211> LENGTH: 488
101 <212> TYPE: PRT
102 <213> ORGANISM: Human
104 <400> SEQUENCE: 7
105 Met Lys His Lys Leu Glu Gln Leu Arg Asn Ser Gly Ala Glu Glu Glu
106 1 5 10 15
107 Glu Tyr Met Pro Met Glu Met Asn Asn Ser Thr Asn Ser Ser Asn Asn
108 20 25 30
109 Ser Leu Ala Leu Thr Ser Pro Tyr Lys Thr Phe Glu Val Val Phe Ile
110 35 40 45
111 Val Leu Val Ala Gly Ser Leu Ser Leu Val Thr Ile Ile Gly Asn Ile
112 50 55 60
113 Leu Val Met Val Ser Ile Lys Val Asn Arg His Leu Gln Thr Val Asn
114 65 70 75 80
115 Asn Tyr Phe Leu Phe Ser Leu Ala Cys Ala Asp Leu Ile Ile Gly Val
116 85 90 95
117 Phe Ser Met Asn Leu Tyr Thr Leu Tyr Thr Val Ile Gly Tyr Trp Pro
118 100 105 110
119 Leu Gly Pro Val Val Cys Asp Leu Trp Leu Ala Leu Asp Tyr Val Val
120 115 120 125
121 Ser Asn Ala Ser Val Met Asn Leu Leu Ile Ile Ser Phe Asp Arg Tyr
122 130 135 140
123 Phe Cys Val Thr Lys Pro Leu Thr Tyr Pro Val Lys Arg Thr Thr Lys
124 145 150 155 160
125 Met Ala Gly Met Met Ile Ala Ala Ala Trp Val Leu Ser Phe Ile Leu

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,009

DATE: 04/10/2002

TIME: 14:17:31

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

```

126          165          170          175
127 Trp Ala Pro Ala Ile Leu Phe Trp Gln Phe Ile Val Gly Val Arg Thr
128          180          185          190
129 Val Glu Asp Gly Glu Cys Tyr Ile Gln Phe Phe Ser Asn Ala Ala Val
130          195          200          205
131 Thr Phe Gly Thr Ala Ile Ala Ala Phe Tyr Leu Pro Val Ile Ile Met
132          210          215          220
133 Thr Val Leu Tyr Trp His Ile Ser Arg Ala Ser Lys Ser Arg Ile Lys
134 225          230          235          240
135 Lys Asp Lys Lys Glu Pro Val Ala Asn Gln Asp Pro Val Ser Pro Ser
136          245          250          255
137 Leu Val Gln Gly Arg Ile Val Lys Pro Asn Asn Asn Asn Met Pro Ser
138          260          265          270
139 Ser Asp Asp Gly Leu Glu His Asn Lys Ile Gln Asn Gly Lys Ala Pro
140          275          280          285
141 Arg Asp Pro Val Thr Glu Asn Cys Val Gln Gly Glu Glu Lys Glu Ser
142          290          295          300
143 Ser Asn Asp Ser Thr Ser Val Ser Ala Val Ala Ser Asn Met Arg Asp
144 305          310          315          320
145 Asp Glu Ile Thr Gln Asp Glu Asn Thr Val Ser Thr Ser Leu Gly His
146          325          330          335
147 Ser Lys Asp Glu Asn Ser Lys Gln Thr Cys Ile Arg Ile Gly Thr Lys
148          340          345          350
149 Thr Pro Lys Ser Asp Ser Cys Thr Pro Thr Asn Thr Thr Val Glu Val
150          355          360          365
151 Val Gly Ser Ser Gly Gln Asn Gly Asp Glu Lys Gln Asn Ile Val Ala
152          370          375          380
153 Arg Lys Ile Val Lys Met Thr Lys Gln Pro Ala Lys Lys Lys Pro Pro
154 385          390          395          400
155 Pro Ser Arg Glu Lys Lys Val Thr Arg Thr Ile Leu Ala Ile Leu Leu
156          405          410          415
157 Ala Phe Ile Ile Thr Trp Ala Pro Tyr Asn Val Met Val Leu Ile Asn
158          420          425          430
159 Thr Phe Cys Ala Pro Cys Ile Pro Asn Thr Val Trp Thr Ile Gly Tyr
160          435          440          445
161 Trp Leu Cys Tyr Ile Asn Ser Thr Ile Asn Pro Ala Cys Tyr Ala Leu
162          450          455          460
163 Cys Asn Ala Thr Phe Lys Lys Thr Phe Lys His Leu Leu Met Cys His
164 465          470          475          480
165 Tyr Lys Asn Ile Gly Ala Thr Arg
166          485
169 <210> SEQ ID NO: 8
170 <211> LENGTH: 431
171 <212> TYPE: PRT
172 <213> ORGANISM: Human
174 <400> SEQUENCE: 8
175 Met Asp Tyr Lys Asp Asp Asp Asp Lys Met Gly Gln Pro Gly Asn Gly
176 1          5          10          15
177 Ser Ala Phe Leu Leu Ala Pro Asn Arg Ser His Ala Pro Asp His Asp

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,009

DATE: 04/10/2002

TIME: 14:17:31

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

```

178          20          25          30
179 Val Thr Gln Gln Arg Asp Glu Val Trp Val Val Gly Met Gly Ile Val
180          35          40          45
181 Met Ser Leu Ile Val Leu Ala Ile Val Phe Gly Asn Val Leu Val Ile
182          50          55          60
183 Thr Ala Ile Ala Lys Phe Glu Arg Leu Gln Thr Val Thr Asn Tyr Phe
184 65          70          75          80
185 Ile Thr Ser Leu Ala Cys Ala Asp Leu Val Met Gly Leu Ala Val Val
186          85          90          95
187 Pro Phe Gly Ala Ala His Ile Leu Met Lys Met Trp Thr Phe Gly Asn
188          100         105         110
189 Phe Trp Cys Glu Phe Trp Thr Ser Ile Asp Val Leu Cys Val Thr Ala
190          115         120         125
191 Ser Ile Glu Thr Leu Cys Val Ile Ala Val Asp Arg Tyr Phe Ala Ile
192          130         135         140
193 Thr Ser Pro Phe Lys Tyr Gln Ser Leu Leu Thr Lys Asn Lys Ala Arg
194 145         150         155         160
195 Val Ile Ile Leu Met Val Trp Ile Val Ser Gly Leu Thr Ser Phe Leu
196          165         170         175
197 Pro Ile Gln Met His Trp Tyr Arg Ala Thr His Gln Glu Ala Ile Asn
198          180         185         190
199 Cys Tyr Ala Asn Glu Thr Cys Cys Asp Phe Phe Thr Asn Gln Ala Tyr
200          195         200         205
201 Ala Ile Ala Ser Ser Ile Val Ser Phe Tyr Val Pro Leu Val Ile Met
202          210         215         220
203 Val Phe Val Tyr Ser Arg Val Phe Gln Glu Ala Lys Arg Gln Leu Gln
204 225         230         235         240
205 Lys Ile Asp Lys Ser Glu Gly Arg Phe His Val Gln Asn Leu Ser Gln
206          245         250         255
207 Val Glu Gln Asp Gly Arg Thr Gly His Gly Leu Arg Arg Ser Ser Lys
208          260         265         270
209 Phe Cys Leu Lys Glu His Lys Ala Leu Lys Thr Leu Gly Ile Ile Met
210          275         280         285
211 Gly Thr Phe Thr Leu Cys Trp Leu Pro Phe Phe Ile Val Asn Ile Val
212          290         295         300
213 His Val Ile Gln Asp Asn Leu Ile Arg Lys Glu Val Tyr Ile Leu Leu
214 305         310         315         320
215 Asn Trp Ile Gly Tyr Val Asn Ser Gly Phe Asn Pro Leu Ile Tyr Cys
216          325         330         335
217 Arg Ser Pro Asp Phe Arg Ile Ala Phe Gln Glu Leu Leu Cys Leu Arg
218          340         345         350
219 Arg Ser Ser Leu Lys Ala Tyr Gly Asn Gly Tyr Ser Ser Asn Gly Asn
220          355         360         365
221 Thr Gly Glu Gln Ser Gly Tyr His Val Glu Gln Glu Lys Glu Asn Lys
222          370         375         380
223 Leu Leu Cys Glu Asp Leu Pro Gly Thr Glu Asp Phe Val Gly His Gln
224 385         390         395         400
225 Gly Thr Val Pro Ser Asp Asn Ile Asp Ser Gln Gly Arg Asn Cys Ser
226          405         410         415

```

## RAW SEQUENCE LISTING

DATE: 04/10/2002

PATENT APPLICATION: US/10/029,009

TIME: 14:17:31

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

```

227 Thr Asn Asp Ser Leu Leu Glu Glu Glu Glu Tyr Met Pro Met Glu
228          420                      425                      430
231 <210> SEQ ID NO: 9
232 <211> LENGTH: 488
233 <212> TYPE: PRT
234 <213> ORGANISM: Human
236 <400> SEQUENCE: 9
237 Met Ala Thr Leu Pro Ala Ala Glu Thr Trp Ile Asp Gly Gly Gly Gly
238 1          5          10          15
239 Val Gly Ala Asp Ala Val Asn Leu Thr Ala Ser Leu Ala Ala Gly Ala
240          20          25          30
241 Ala Thr Gly Ala Val Glu Thr Gly Trp Leu Gln Leu Leu Asp Gln Ala
242          35          40          45
243 Gly Asn Leu Ser Ser Ser Pro Ser Ala Leu Gly Leu Pro Val Ala Ser
244          50          55          60
245 Pro Ala Pro Ser Gln Pro Trp Ala Asn Leu Thr Asn Gln Phe Val Gln
246 65          70          75          80
247 Pro Ser Trp Arg Ile Ala Leu Trp Ser Leu Ala Tyr Gly Val Val Val
248          85          90          95
249 Ala Val Ala Val Leu Gly Asn Leu Ile Val Ile Trp Ile Ile Leu Ala
250          100         105         110
251 His Lys Arg Met Arg Thr Val Thr Asn Tyr Phe Leu Val Asn Leu Ala
252          115         120         125
253 Phe Ser Asp Ala Ser Met Ala Ala Phe Asn Thr Leu Val Asn Phe Ile
254          130         135         140
255 Tyr Ala Leu His Ser Glu Trp Tyr Phe Gly Ala Asn Tyr Cys Arg Phe
256 145          150         155         160
257 Gln Asn Phe Phe Pro Ile Thr Ala Val Phe Ala Ser Ile Tyr Ser Met
258          165         170         175
259 Thr Ala Ile Ala Val Asp Arg Tyr Met Ala Ile Ile Asp Pro Leu Lys
260          180         185         190
261 Pro Arg Leu Ser Ala Thr Ala Thr Lys Ile Val Ile Gly Ser Ile Trp
262          195         200         205
263 Ile Leu Ala Phe Leu Leu Ala Phe Pro Gln Cys Leu Tyr Ser Lys Thr
264          210         215         220
265 Lys Val Met Pro Gly Arg Thr Leu Cys Phe Val Gln Trp Pro Glu Gly
266 225          230         235         240
267 Pro Lys Gln His Phe Thr Tyr His Ile Ile Val Ile Ile Leu Val Tyr
268          245         250         255
269 Cys Phe Pro Leu Leu Ile Met Gly Ile Thr Tyr Thr Ile Val Gly Ile
270          260         265         270
271 Thr Leu Trp Gly Gly Glu Ile Pro Gly Asp Thr Cys Asp Lys Tyr His
272          275         280         285
273 Glu Gln Leu Lys Ala Lys Arg Lys Val Val Lys Met Met Ile Ile Val
274          290         295         300
275 Val Met Thr Phe Ala Ile Cys Trp Leu Pro Tyr His Ile Tyr Phe Ile
276 305          310         315         320
277 Leu Thr Ala Ile Tyr Gln Gln Leu Asn Arg Trp Lys Tyr Ile Gln Gln
278          325         330         335

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/029,009

DATE: 04/10/2002

TIME: 14:17:32

Input Set : A:\111025-173US2.ST25.txt

Output Set: N:\CRF3\04102002\J029009.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date